

REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the pending application. The Office Action dated August 6, 2007, has been received and its contents carefully reviewed.

By this Response, claim 1 has been amended, and claim 3 has been cancelled without prejudice or disclaimer of the subject matter recited therein. No new matter has been added. Accordingly, claims 1-2 and 5-6 remain pending in this application. Reexamination and reconsideration of the pending claims are respectfully requested.

In the Office Action, claims 1-2 and 5-6 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 has been amended to recite “a data pad protection electrode connected to the data pad”. Accordingly, the Applicants respectfully submit that the rejection against amended independent claim 1 and thus the rejections against claims 2 and 5-6, which depend from amended independent claim 1, have been overcome and should be withdrawn.

In the Office Action, claims 1, 2 and 5-6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,380,559B1 to Park et al. (hereinafter “Park”) in view of U.S. Patent No. 6,429,057B1 to Hong et al. (hereinafter “Hong”) and further in view of U.S. Patent No. 5,517,342 to Kim et al. (hereinafter “Kim”). Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Park, Hong and Kim and further in view of U.S. Patent No. 6,255,130B1 to Kim et al. (hereinafter “Kim 130”).

The rejection of claims 1-2, 5 and 6 is respectfully traversed and reconsideration is requested. Claims 1-2, 5 and 6 are allowable over the cited references in that each of these claims recites a combination of elements including, for example, “wherein the cutting-off plate of cutting-off region is formed by a metal other than molybdenum” and “exposing entire surface of the gate pad and the data pad protection electrode of the pad part by a etching process using the cutting-off plate without forming a photoresist pattern”. None of the cited references including Park, Hong, Kim and Kim 130 singly or in combination, teaches or suggests at least this feature of the claimed invention.

To expose the gate pad and the data pad protection electrode, the processes of the present invention are performed in the following steps: depositing protection film on the substrate(step 1)→preparing a cutting-off plate(step 2)→arranging the cutting-off on the protection film(step 3)→etching the protection film(step 4). In contrast, the processes of Park are performed in the following steps : depositing protection film on the substrate(step 1)→**depositing photoresist on the protection film**(step 2)→**preparing a photo-mask**(step 3)→**aling the photo-mask on the photo-resist**(step 4)→**exposing the photo-resist through the photo-mask**(step 5)→**developing the photo-resist to form a photo-resist pattern of the same pattern with photo-mask**(step 6)→**etching the protection film using the photo-resist pattern**(step 7)→**removing the photo-resist pattern**(step 8). As a result, the Park includes further steps of “**depositing photo-resist on the protection film**(step 2); **preparing a photo-mask**(step 3); **aling the photo-mask on the photo-resist**(step 4); **exposing the photo-resist through the photo-mask**(step 5); **developing the photo-resist to form a photo-resist pattern of the same pattern with photo-mask**(step 6); and **removing the photo-resist pattern**(step 8). Accordingly, the present invention suggests simplified steps for exposing the pad.

Also, the Park, Kim and Hong include a contact hole penetrating the protection film in pad area. In the Park and Kim, a portion of gate and data pad exposes through contact hole. In the Hong, a portion of conductive pattern is exposed through contact hole. As the resolution of LCD becomes higher, the contact hole of Park, Kim and Hong is smaller in the width. If contact is not formed at least across the width, the following contact failure may occur: contact failure between pad and supplemental pad in the Park and Kim and contact failure between the conductive pattern and the signal transmission film (ex, TCP) in the Hong. In contrast, in the present invention, whole pad area is exposed by etching out the protection film and gate insulating layer covering the pads, thereby exposing the entire surface of the pad. In the case, where the data pad directly contacts with the data pad protection electrode without contact hole and the gate pad and the data pad protection electrode contacts with the TCP without contact hole. As a result, the present invention may provide with advantage of preventing the above contact failure.

Accordingly, Applicant respectfully submits that claim 1 and claims 2, 5 and 6, which depend from claim 1, are allowable over the cited references.


Applicants believe the foregoing amendments place the application in condition for allowance and early, favorable action is respectfully solicited.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at (202) 496-7500 to discuss the steps necessary for placing the application in condition for allowance. All correspondence should continue to be sent to the below-listed address.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. § 1.136, and any additional fees required under 37 C.F.R. § 1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911. *A duplicate copy of this sheet is enclosed.*

Respectfully submitted,

Dated: 31 October 2007

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